

⑬ Int. Cl. 4

識別記号

庁内整理番号

⑭ 公開 昭和62年(1987)11月12日

H 01 J 29/86  
9/385  
17/16Z-6680-5C  
A-6680-5C  
8725-5C

審査請求 未請求 (全2頁)

⑮ 考案の名称 表示管

⑯ 実 願 昭61-66964

⑰ 出 願 昭61(1986)5月6日

⑱ 考 案 者 衛 藤 五 郎 茂原市大芝629 双葉電子工業株式会社内

⑲ 出 願 人 双葉電子工業株式会社 茂原市大芝629

⑳ 代 理 人 弁理士 西村 教光

## ㉑ 実用新案登録請求の範囲

表示用電極が配設された内部空間を気密に保持する外囲器を備えた表示管において、前記外囲器の側面に設けられた開口部と、前記側面に一端面が接着固定されて前記開口部に連通する排気管とを具備することを特徴とする表示管。

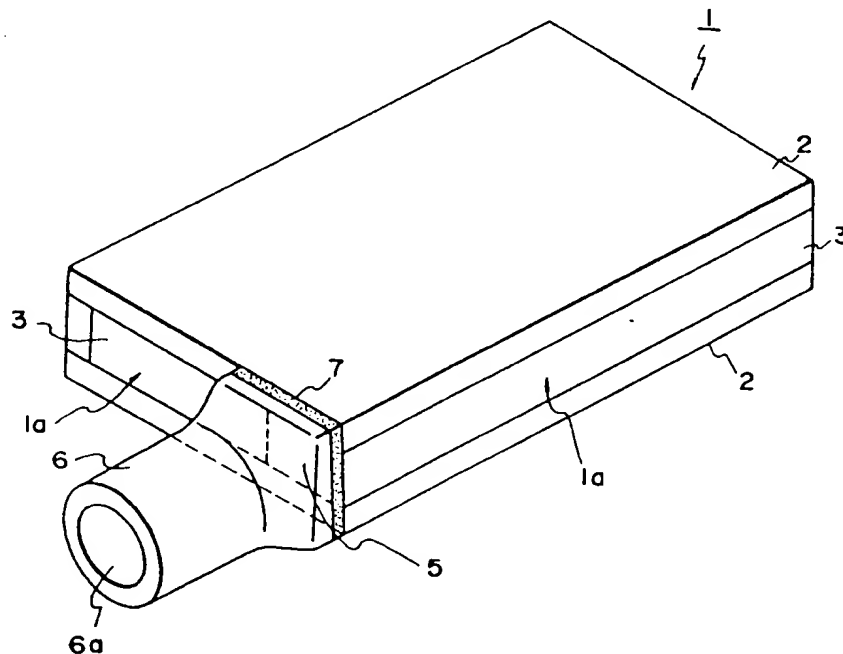
## 図面の簡単な説明

第1図は本考案の一実施例を示す斜視図、第2

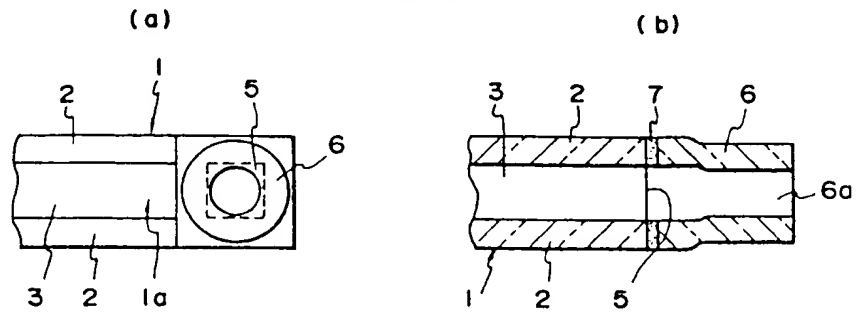
図a, bはそれぞれ同実施例の要部正面図及び側面方向から見た断面図、第3図a~cは他の3種の実施例を示す斜視図であつて、各実施例における構成上の要部である排気管を示す図、第4図は従来の表示管及び排気管の取付け構造を示す一部切欠き斜視図である。

1……外囲器、1a……側面、5……開口部、6, 8, 9, 10……排気管。

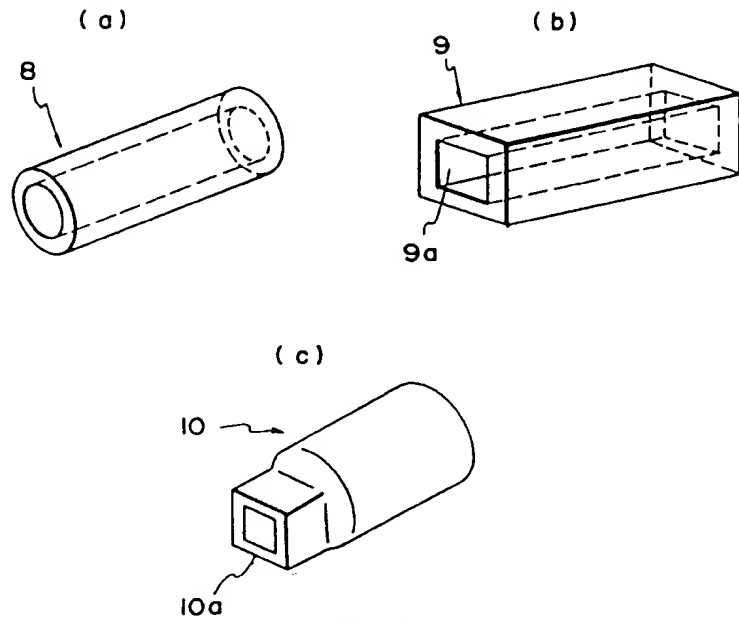
第1図



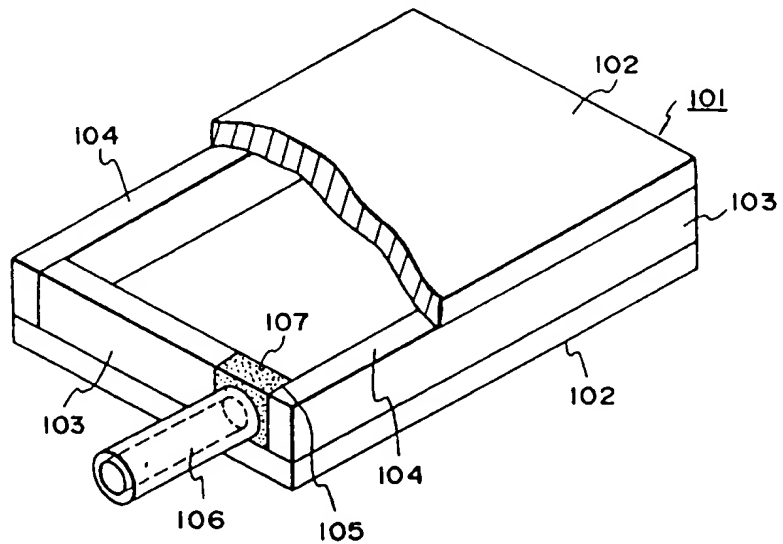
第 2 図



第 3 図



第 4 図



## GRANDS FOR REJECTION

1. The present application cannot be patented since the specification and drawings do not meet the requirements under Article 42, Para. 3 of the Patent Act as set forth below.

There are unclear portions in the expression and the content of units in the detailed description of the invention.

- Example: " $10^{-5}$  torr" (page 13, line 18 of the original English text), "in the range of 10 to 200" (page 24, lines 18-19), " $1 \times 10^{-6}$  torr" (page 43, line 25 - page 44, line 1), etc.

2. The inventions defined by the claims cannot be patented under Article 29, Para. 2 of the Patent Act, since the claimed inventions could easily have been made by a person of ordinary skill in the art as set forth below.

The present invention is characterized in that a vent tube is attached to a side of an outer frame or a face plate or a rear plate in electron-emitting devices formed a spacer in the form of a flat plate thereon. However, the present invention easily could have been made in view of: the matrix-addressed flat display panel disclosed in International Publication No. WO 88/01098 ('88.2.11), which flat display panel comprises phosphor-coated stripes 23, 24, and 26 onto which electrons emitted from gates 17, 18, and 19, respectively, within a face structure 12 and a common base 14 are illuminated, and elongated parallel legs 27 for supporting the vacuum load; and the plasma display panel disclosed in European Patent Publication No. 0 451 362 A2 ('91.10.16), in which a glass tube 7 is joined to a back panel member 1; and the display tube disclosed in Japanese Utility Publication No. 62-178442 ('87.11.12), in which exhaust tubes 6, 8, 9, 10 are attached to an envelope 1.

## OUR COMMENTS/RECOMMENDATIONS

1. The expressions which the Examiner has indicated to be unclear are, in fact, units of measurement well known in the fields of vacuum technology and mass spectroscopy, where the latter technology is used to evaluate the former. By referring to standard reference works in the art of vacuum technology, we shall attempt to persuade the Examiner that the expressions in question would be quite clear to one of ordinary skill in that art.

2. Rejection Under Art. 29, Para. 2

The Examiner has asserted that the claimed invention of the present application would have been obvious to one of ordinary skill in the art in view of:

International Publication No. WO 88/01098 ("the '098 publication"), which is directed to *Matrix-Addressed Flat Panel Display* and was published on 11 February 1988 ;

"별첨"

- 1.본원발명의 상세한 설명에 있어서 단위의 표기와 내용이 불명료한 부분  
(예: 11쪽/3째줄의 " $10^{05}$  토르", 19/8의 "10에서 200에 걸린 입자수", 34/10  
등의 " $1 \times 10^{-6}$  토르"등등)이 있고,
- 2.본원발명은 평판 형태의 스페이서가 형성된 전자방출소자에 있어서 배출  
튜브가 외부 프레임측 또는 전면판 또는 배면판에 부착되는 기술을 특징  
으로 하나, 이는 별첨 W0 88/01098호('88.2.11)에서 시사하는 전계방출소  
자가 전면판(12) 및 배면판(14)내에 에미터부등(17, 18, 19)로부터 방출  
된 전자들이 조사되는 각각의 형광체(23, 24, 26)와 진공하중을 지지하기  
위한 평판 형태의 레그(27)등으로 이루어지는 기술구성과 별첨 유럽특허  
공보 제451362호('91.10.16)에서 시사하는 플라즈마 디스플레이 패널의 배  
기구조로서 글래스 튜브(7)가 기판에 부착되는 기술구성과 별첨 일본 실  
개소 62-178442호('87.11.12)에서 시사하는 표시관에서 외위기(1)의 측면  
에 배기관(6, 8, 9, 10)을 부착하는 기술구성으로부터 통상의 지식을 가  
진 자가 용이하게 발명할 수 있는 것임.

첨부: 인용참증 각 1부. 끝.